



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TECH CENTER 1600/2900

JUN 05 2001

RECEIVED

In re Application of:

Donald R. Owen

Serial No.: 09/820,053

Filed: March 28, 2001

For: SHORT BIOACTIVE PEPTIDES

§  
§  
§  
§  
§  
§  
§  
§

Group Art Unit: 1646

Examiner: Not assigned

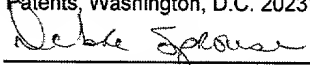
Att'y Docket: 068370.0104

Client Docket: HELX:027

STATEMENT AS REQUIRED UNDER 37 C.F.R. § 1.821(f)

Commissioner for Patents  
Washington, D.C. 20231

Sir:

CERTIFICATE OF MAILING 37 C.F.R. 1.8	
I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on the date below:	
May 23, 2001	 Signature

This submission is in response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures dated April 27, 2001. Submitted herewith are a paper and computer readable form of the sequence listing of those sequences in the captioned patent application.

The computer readable form of the sequence listing is the same as the paper copy of the sequence listing. The sequence information provided in the Specification is also the same as the sequence listing of the enclosed computer readable and paper forms of the sequence listing.

Please enter the enclosed sequence listing in place of the originally filed sequence listing. The submitted sequence listing does not introduce new matter into the patent application.

Respectfully submitted,



Christopher J. Buntel, Ph.D.

Reg. No. 44,573

Customer No. 23640

AGENT FOR ASSIGNEE,

HELIX BIOMEDIX, INC.

Baker Botts L.L.P.  
One Shell Plaza  
910 Louisiana  
Houston, TX 77002-4995  
(713) 229-1992

May 23, 2001

09820053-052901  
T06250" E5002360



RECEIVED

JUN 05 2001

TECH CENTER 1600/2900

SEQUENCE LISTING

<110> Owen, D. R.

<120> SHORT BIOACTIVE PEPTIDES

<130> HELX027

<140>

<141>

<160> 165

<170> PatentIn Ver. 2.1

<210> 1

<211> 23

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 1

Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 2

<211> 23

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (23)

<223> AMIDATION

<400> 2

Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 3

<211> 38

<212> PRT

<213> ARTIFICIAL SEQUENCE

TOP SECRET E5002360

<220>

<223> SYNTHETIC SEQUENCE

<400> 3

Met Pro Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Val Gly Arg Asn  
1 5 10 15

Ile Arg Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly  
20 25 30

Glu Ala Lys Ala Leu Gly  
35

<210> 4

<211> 23

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (23)

<223> AMIDATION

<400> 4

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Leu Ala Leu Ala Leu  
20

<210> 5

<211> 38

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (38)

<223> AMIDATION

<400> 5

Met Pro Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Val Gly Arg Asn  
1 5 10 15

Ile Arg Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly  
20 25 30

Glu Ala Lys Ala Leu Gly  
35



<210> 9  
 <211> 23  
 <212> PRT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (23)  
 <223> AMIDATION

<400> 9  
 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Leu Lys Lys Leu Lys  
           1                  5                  10                  15

Lys Leu Ala Lys Lys Ala Leu  
                   20

<210> 10  
 <211> 23  
 <212> PRT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (23)  
 <223> AMIDATION

<400> 10  
 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Ala Lys Lys Leu Lys  
           1                  5                  10                  15

Lys Leu Ala Lys Lys Ala Leu  
                   20

<210> 11  
 <211> 21  
 <212> PRT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (21)  
 <223> AMIDATION

09920053-053904

<400> 11

Phe Ala Leu Ala Lys Leu Ala Lys Lys Ala Lys Ala Lys Leu Lys Lys  
1 5 10 15

Ala Leu Lys Ala Leu  
20

<210> 12

<211> 19

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (19)

<223> AMIDATION

<400> 12

Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu Lys  
1 5 10 15

Lys Ala Leu

<210> 13

<211> 19

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 13

Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu Lys  
1 5 10 15

Lys Ala Leu

<210> 14

<211> 19

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 14

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu Ala Leu

<210> 15  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 15  
Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 16  
<211> 16  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (16)  
<223> AMIDATION

<400> 16  
Phe Ala Leu Ala Leu Lys Lys Ala Leu Lys Ala Leu Lys Lys Ala Leu  
1 5 10 15

<210> 17  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

TOBACCO "EUREKA"



[illegible]

Leu

<220>  
<223> SYNTHETIC SEQUENCE

<400> 18  
Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu Ala Leu

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>
<221> MOD_RES
<222> (13)..(14)
<223> Xaa = D-lysine
```

<400> 19  
Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Xaa Xaa Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

```
<210> 20
<211> 15
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

Table 1. Demographic characteristics of the study population	
Age (years)	50.0 ± 10.0
Gender	
Male	50.0%
Female	50.0%
Education (years)	12.0 ± 2.0
Marital status	
Married	80.0%
Single	20.0%
Occupation	
Professional	30.0%
Managerial	20.0%
Technical	10.0%
Skilled	20.0%
Unskilled	20.0%
Income (USD/month)	1000.0 ± 500.0
Health status	
Good	70.0%
Fair	20.0%
Poor	10.0%

```
<210> 21
<211> 15
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```
<220>  
<221> MOD_RES  
<222> (15)  
<223> AMIDATION
```

```
<210> 22
<211> 15
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```

<220>
<221> MOD_RES
<222> (15)
<223> AMIDATION

```

```
<210> 23
<211> 19
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```
<220>
<221> MOD RES
```

<222> (19)  
<223> AMIDATION

<400> 23  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu Ala Lys

<210> 24  
<211> 22  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (22)  
<223> AMIDATION

<400> 24  
Gly Ile Gly Lys Phe Leu Lys Lys Ala Lys Lys Phe Gly Lys Ala Phe  
1 5 10 15

Val Lys Ile Leu Lys Lys  
20

<210> 25  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 25  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Leu Leu  
1 5 10

<210> 26  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

Variable	Mean	SD	Min	Max
Age	38.5	10.5	25	55
Gender	0.5	0.5	0	1
Marital status	0.5	0.5	0	1
Education	12.5	1.5	10	15
Income	15.5	5.5	10	25
Health status	0.5	0.5	0	1
Smoking status	0.5	0.5	0	1
Alcohol consumption	0.5	0.5	0	1
Exercise frequency	0.5	0.5	0	1
Stress level	0.5	0.5	0	1
Sleep quality	0.5	0.5	0	1
Work satisfaction	0.5	0.5	0	1
Life satisfaction	0.5	0.5	0	1
Overall health	0.5	0.5	0	1

Phe Ala Lys Lys Leu Ala Lys Leu Ala Leu Lys Leu Ala Lys Leu  
1 5 10 15

<220>  
<223> SYNTHETIC SEQUENCE

<400> 27  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala Leu  
1 5 10

<220>  
<223> SYNTHETIC SEQUENCE

<400> 28  
Phe Ala Lys Lys Leu Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu  
1 5 10 15

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>
<221> MOD RES
```

TABLE 1	
Summary of the 1997-1998 season	
Category	Value
Total number of cases	1,000
Number of cases by age group	
0-4 years	150
5-14 years	250
15-24 years	300
25-34 years	150
35-44 years	100
45-54 years	50
55-64 years	20
65-74 years	10
75+ years	5
Number of cases by sex	
Male	550
Female	450
Number of cases by region	
Region A	300
Region B	250
Region C	200
Region D	150
Region E	100
Number of cases by season	
Spring	250
Summer	300
Autumn	200
Winter	150
Number of cases by hospitalization status	
Hospitalized	600
Not hospitalized	400
Number of cases by outcome	
Recovered	800
Deceased	200

```
<210> 30
<211> 13
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```
<220>  
<221> MOD_RES  
<222> (13)  
<223> AMIDATION
```

```
<210> 31
<211> 12
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```

<220>
<221> MOD_RES
<222> (12)
<223> AMIDATION

```

```
<210> 32
<211> 17
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```
<220>
<221> MOD_RES
<222> (17)
<223> AMIDATION
```

<400> 32

Val Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu

<210> 33

<211> 15

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (15)

<223> AMIDATION

<400> 33

Lys Trp Lys Leu Phe Lys Lys Ile Gly Ala Val Leu Lys Val Leu  
1 5 10 15

<210> 34

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 34

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ala Leu  
1 5 10

<210> 35

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 35

Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Leu Leu  
1 5 10

<210> 36

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 36

Phe Ala Lys Leu Leu Lys Leu Ala Ala Lys Lys Leu Leu  
1 5 10

<210> 37

<211> 10

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (10)

<223> AMIDATION

<400> 37

Phe Ala Lys Leu Leu Ala Lys Lys Leu Leu  
1 5 10

<210> 38

<211> 10

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (10)

<223> AMIDATION

<400> 38

Phe Ala Lys Lys Leu Ala Lys Ala Leu Leu  
1 5 10





<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 42

Ile Leu Pro Trp Lys Trp Pro Trp Trp Pro Trp Arg Arg  
1 5 10

<210> 43

<211> 15

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (15)

<223> AMIDATION

<400> 43

Phe Ala Lys Ala Leu Lys Ala Leu Leu Lys Ala Leu Lys Ala Leu  
1 5 10 15

<210> 44

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 44

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Ala Lys Leu  
1 5 10

<210> 45

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

09820053-052901

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 45

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Leu Lys Leu  
1 5 10

<210> 46

<211> 22

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (22)

<223> AMIDATION

<400> 46

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Lys Trp Lys Leu  
20

<210> 47

<211> 18

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 47

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys

<210> 48

<211> 22

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

FOF50-650260



<222> (13)  
<223> AMIDATION

<400> 51  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Ala Lys Leu Leu  
1 5 10

<210> 52  
<211> 14  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (14)  
<223> AMIDATION

<400> 52  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Ala Lys Ala Ala Leu  
1 5 10

<210> 53  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 53  
Phe Ala Lys Lys Leu Ala Lys Lys Ala Lys Leu Ala Lys Lys Leu  
1 5 10 15

<210> 54  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

106350-0502560



[illegible]

<400> 58  
Phe Ala Lys Ala Leu Ala Lys Leu Ala Lys Lys Leu Leu

```
<210> 59
<211> 13
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>  
<221> MOD_RES  
<222> (13)  
<223> AMIDATION
```

<400> 59  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ala Ala  
1 5 10

```
<210> 60
<211> 13
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>  
<221> MOD_RES  
<222> (13)  
<223> AMIDATION
```

<400> 60  
Phe Ala Lys Leu Leu Ala Leu Ala Leu Lys Leu Lys Leu  
1 5 10

```
<210> 61
<211> 13
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>
<221> MOD RES
```

Table 1. Demographic characteristics of the study population	
Age (years)	Mean (SD)
Male	55.2 (10.5)
Female	56.8 (11.2)
Education (years)	Mean (SD)
Male	12.5 (2.1)
Female	12.8 (2.3)
Marital status	
Married	78%
Single	22%
Occupation	
Professional	35%
Managerial	25%
Skilled	20%
Unskilled	20%
Retired	10%
Income (USD/month)	Mean (SD)
Male	1,200 (300)
Female	1,150 (280)
Health insurance	
Yes	85%
No	15%
Smoking status	
Current smoker	15%
Former smoker	25%
Never smoker	60%
Alcohol consumption	
Regular	10%
Occasional	20%
Never	70%

```
<210> 62
<211> 13
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```
<220>  
<221> MOD_RES  
<222> (13)  
<223> AMIDATION
```

```
<210> 63
<211> 31
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```
<220>  
<221> MOD_RES  
<222> (31)  
<223> AMIDATION
```

Ala Lys Leu Ala Leu Ala Leu Lys Ala Leu Ala Leu Lys Ala Leu  
20 25 30

<220>  
<223> SYNTHETIC SEQUENCE

<400> 64  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu

1

5

10

15

Ile Gly Ala Val Leu Lys Val  
20

&lt;210&gt; 65

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; ARTIFICIAL SEQUENCE

&lt;220&gt;

&lt;223&gt; SYNTHETIC SEQUENCE

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (13)

&lt;223&gt; AMIDATION

&lt;400&gt; 65

Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Leu Lys Leu  
1 5 10

&lt;210&gt; 66

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; ARTIFICIAL SEQUENCE

&lt;220&gt;

&lt;223&gt; SYNTHETIC SEQUENCE

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (13)

&lt;223&gt; AMIDATION

&lt;400&gt; 66

Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Ala Leu  
1 5 10

&lt;210&gt; 67

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; ARTIFICIAL SEQUENCE

&lt;220&gt;

&lt;223&gt; SYNTHETIC SEQUENCE

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (12)

&lt;223&gt; AMIDATION

&lt;400&gt; 67

Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Leu

T06250-ES002360



10

```
<220>
<221> MOD_RES
<222> (20)
<223> AMIDATION
```

<400> 68  
Lys Trp Lys Leu Phe Lys Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu  
1 5 10 15

Lys Lys Ala Leu  
20

```
<220>  
<221> MOD_RES  
<222> (23)  
<223> AMIDATION
```

<400> 69  
Lys Ile Ala Lys Val Ala Leu Ala Lys Leu Gly Ile Gly Ala Val Leu  
1 5 10 15

Lys Val Leu Thr Thr Gly Leu  
20

```
<220>  
<221> MOD_RES  
<222> (12)  
<223> AMIDATION
```

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	---

<400> 70  
Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu  
1 5 10

<210> 71  
<211> 19  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (19)  
<223> AMIDATION

<400> 71  
Met Pro Lys Glu Lys Val Phe Leu Lys Ile Glu Lys Met Gly Arg Asn  
1 5 10 15

Ile Arg Asn

<210> 72  
<211> 26  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (26)  
<223> AMIDATION

<400> 72  
Gly Ile Gly Ala Val Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu  
1 5 10 15

Ile Ser Trp Ile Lys Arg Lys Arg Gln Gln  
20 25

<210> 73  
<211> 16  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES  
<222> (16)  
<223> AMIDATION

<400> 73

Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Ala Leu  
1 5 10 15

<210> 74  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 74

Phe Ala Lys Lys Leu Leu Ala Lys Ala Leu Lys Leu  
1 5 10

<210> 75  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 75

Phe Ala Lys Phe Leu Ala Lys Phe Leu Lys Lys Ala Leu  
1 5 10

<210> 76  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

106250-650236

Descriptive statistics		Correlation		Regression		Path coefficients		Structural equation model			
Variable	Mean	SD	Variable	Mean	SD	Variable	Mean	SD	Variable	Mean	SD
1. Age	35.5	10.5	2. Age	35.5	10.5	3. Age	35.5	10.5	4. Age	35.5	10.5
5. Age	35.5	10.5	6. Age	35.5	10.5	7. Age	35.5	10.5	8. Age	35.5	10.5
9. Age	35.5	10.5	10. Age	35.5	10.5	11. Age	35.5	10.5	12. Age	35.5	10.5
13. Age	35.5	10.5	14. Age	35.5	10.5	15. Age	35.5	10.5	16. Age	35.5	10.5
17. Age	35.5	10.5	18. Age	35.5	10.5	19. Age	35.5	10.5	20. Age	35.5	10.5
21. Age	35.5	10.5	22. Age	35.5	10.5	23. Age	35.5	10.5	24. Age	35.5	10.5
25. Age	35.5	10.5	26. Age	35.5	10.5	27. Age	35.5	10.5	28. Age	35.5	10.5
29. Age	35.5	10.5	30. Age	35.5	10.5	31. Age	35.5	10.5	32. Age	35.5	10.5
33. Age	35.5	10.5	34. Age	35.5	10.5	35. Age	35.5	10.5	36. Age	35.5	10.5
37. Age	35.5	10.5	38. Age	35.5	10.5	39. Age	35.5	10.5	40. Age	35.5	10.5
41. Age	35.5	10.5	42. Age	35.5	10.5	43. Age	35.5	10.5	44. Age	35.5	10.5
45. Age	35.5	10.5	46. Age	35.5	10.5	47. Age	35.5	10.5	48. Age	35.5	10.5
49. Age	35.5	10.5	50. Age	35.5	10.5	51. Age	35.5	10.5	52. Age	35.5	10.5
53. Age	35.5	10.5	54. Age	35.5	10.5	55. Age	35.5	10.5	56. Age	35.5	10.5
57. Age	35.5	10.5	58. Age	35.5	10.5	59. Age	35.5	10.5	60. Age	35.5	10.5
61. Age	35.5	10.5	62. Age	35.5	10.5	63. Age	35.5	10.5	64. Age	35.5	10.5
65. Age	35.5	10.5	66. Age	35.5	10.5	67. Age	35.5	10.5	68. Age	35.5	10.5
69. Age	35.5	10.5	70. Age	35.5	10.5	71. Age	35.5	10.5	72. Age	35.5	10.5
73. Age	35.5	10.5	74. Age	35.5	10.5	75. Age	35.5	10.5	76. Age	35.5	10.5
77. Age	35.5	10.5	78. Age	35.5	10.5	79. Age	35.5	10.5	80. Age	35.5	10.5
81. Age	35.5	10.5	82. Age	35.5	10.5	83. Age	35.5	10.5	84. Age	35.5	10.5
85. Age	35.5	10.5	86. Age	35.5	10.5	87. Age	35.5	10.5	88. Age	35.5	10.5
89. Age	35.5	10.5	90. Age	35.5	10.5	91. Age	35.5	10.5	92. Age	35.5	10.5
93. Age	35.5	10.5	94. Age	35.5	10.5	95. Age	35.5	10.5	96. Age	35.5	10.5
97. Age	35.5	10.5	98. Age	35.5	10.5	99. Age	35.5	10.5	100. Age	35.5	10.5

<210> 77

<212> PRT

$\langle 220 \rangle$

 $\langle 220 \rangle$ 

&lt;221&gt; MOD RES

 $\langle 222 \rangle \quad (13)^{-}$ 

<400> 77

<210> 78

<211> 13

&lt;212&gt; PRT

 $\langle 220 \rangle$  $\langle 220 \rangle$ 

<221> MOD RES

 $\langle 222 \rangle \quad (13) \overline{\phantom{00}}$ 

<400> 78

<210> 79

<211> 13

<212> PRT

 $\langle 220 \rangle$  $\langle 220 \rangle$ 

<221> MOD RES

 $\langle 222 \rangle \quad (13)^{-}$ 

<400> 79

Phe Ala Lys Leu Phe Ala Lys Ala Phe Lys Lys Ala Leu

1

5

10

<210> 80  
 <211> 13  
 <212> PRT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (13)  
 <223> AMIDATION

<400> 80  
 Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Phe Leu  
 1 5 10

<210> 81  
 <211> 14  
 <212> PRT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (14)  
 <223> AMIDATION

<400> 81  
 Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Phe Ala Leu  
 1 5 10

<210> 82  
 <211> 14  
 <212> PRT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (14)  
 <223> AMIDATION

<400> 82  
 Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Phe Ala Leu  
 1 5 10



[illegible]

<223> SYNTHETIC SEQUENCE

<221> MOD RES

 $\langle 222 \rangle \quad (13)^{-}$ 

## <223> AMIDATION

<400> 86

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Val Leu  
1 5 10

<210> 87

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

 $\langle 220 \rangle$ 

<221> MOD RES

 $\langle 222 \rangle \quad (13)\bar{}$ 

## <223> AMIDATION

<400> 87

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ile Leu  
1 5 10

<210> 88

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

 $\langle 220 \rangle$ 

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD RES

 $\langle 222 \rangle \quad (13)\overline{}$ 

## <223> AMIDATION

<400> 88

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Glu Leu  
1 5 10

<210> 89

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

 $\langle 220 \rangle$

Variable	Mean	SD	Min	Max
Age	34.5	10.2	21	55
Gender	0.5	0.5	0	1
Marital status	0.6	0.5	0	1
Education	12.5	1.5	9	16
Income	15.2	5.8	10	25
Health status	0.7	0.4	0	1
Stress level	3.2	1.1	1	5
Life satisfaction	4.1	0.8	3	5
Work-life balance	3.8	0.9	2	5
Family support	4.5	0.7	3	5
Community support	4.2	0.8	3	5
Work environment	3.5	1.0	2	5
Job satisfaction	4.0	0.9	3	5
Organizational commitment	3.9	0.8	2	5
Turnover intention	1.5	0.6	1	3
Job performance	4.3	0.7	3	5
Employee engagement	4.1	0.8	3	5
Work-life balance	3.8	0.9	2	5
Family support	4.5	0.7	3	5
Community support	4.2	0.8	3	5
Work environment	3.5	1.0	2	5
Job satisfaction	4.0	0.9	3	5
Organizational commitment	3.9	0.8	2	5
Turnover intention	1.5	0.6	1	3
Job performance	4.3	0.7	3	5
Employee engagement	4.1	0.8	3	5

<221> MOD RES

## <223> AMIDATION

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ser Leu  
1 5 10

<211> 5

<213> ARTIFICIAL SEQUENCE

<223> SYNTHETIC SEQUENCE

<221> MOD RES

### <223> AMIDATION

Phe Ala Lys Leu Ala  
1 5

<211> 5

<213> ARTIFICIAL SEQUENCE

<223> SYNTHETIC SEQUENCE

<221> MOD RES

## <223> AMIDATION

Phe Ala Lys Leu Phe  
1 5

<211> 5

<213> ARTIFICIAL SEQUENCE

<223> SYNTHETIC SEQUENCE

<220>





<400> 95

Phe Ala Phe Gly Lys Gly Ile Gly Lys Val Gly Lys Lys Leu Leu  
1 5 10 15

<210> 96

<211> 22

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (22)

<223> AMIDATION

<400> 96

Phe Ala Lys Ala Ile Ala Lys Ile Ala Phe Gly Lys Gly Ile Gly Lys  
1 5 10 15

Val Gly Lys Lys Leu Leu  
20

<210> 97

<211> 22

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (22)

<223> AMIDATION

<400> 97

Phe Ala Lys Leu Trp Ala Lys Leu Ala Phe Gly Lys Gly Ile Gly Lys  
1 5 10 15

Val Gly Lys Lys Leu Leu  
20

<210> 98

<211> 12

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

TOP SECRET





10

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>  
<221> MOD_RES  
<222> (12)  
<223> AMIDATION
```

<400> 105  
Phe Ala Lys Ile Ile Ala Lys Ile Ala Lys Lys Ile  
1 5 10

```
<210> 106
<211> 12
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```

<220>
<221> MOD_RES
<222> (12)
<223> AMIDATION

```

<400> 106  
Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu  
1 5 10

```
<210> 107
<211> 8
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>  
<221> MOD_RES  
<222> (8)  
<223> AMIDATION
```

<400> 107  
Phe Ala Leu Lys Ala Leu Lys Lys  
1 5

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	---

```

<220>
<221> MOD_RES
<222> (13)
<223> AMIDATION

```

```
<210> 109
<211> 17
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

```
<220>  
<221> MOD_RES  
<222> (17)  
<223> AMIDATION
```

Arg

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>  
<221> MOD_RES  
<222> (13)  
<223> AMIDATION
```

<400> 110  
Phe Ala Lys Leu Ala Lys Lys Ala Leu Ala Lys Leu Leu  
1 5 10

[illegible]

```
<220>
<221> MOD_RES
<222> (13)
<223> AMIDATION
```

```
<220>  
<221> MOD_RES  
<222> (13)  
<223> AMIDATION
```

<400> 111  
Lys Ala Lys Leu Ala Lys Lys Ala Leu Ala Lys Leu Leu  
1 5 10

```
<210> 112
<211> 17
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>
<221> MOD_RES
<222> (17)
<223> AMIDATION
```

<400> 112  
Lys Leu Ala Leu Lys Leu Ala Leu Lys Ala Leu Lys Ala Ala Lys Leu  
1 5 10 15

Ala

```
<210> 113
<211> 11
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>  
<221> MOD_RES  
<222> (11)  
<223> AMIDATION
```





<400> 116  
Val Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Val Leu  
1 5 10

<210> 117  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 117  
Tyr Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ala Leu  
1 5 10

<210> 118  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 118  
Lys Leu Leu Lys Leu Leu Leu Lys Leu Tyr Lys Lys Leu Leu Lys Leu  
1 5 10 15

Leu

<210> 119  
<211> 26  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (26)  
<223> AMIDATION

FOUOUE" E5002350

<400> 119

Phe Ala Val Gly Leu Arg Ala Ile Lys Arg Ala Leu Lys Lys Leu Arg  
1 5 10 15

Arg Gly Val Arg Lys Val Ala Lys Asp Leu  
20 25

<210> 120

<211> 16

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (16)

<223> AMIDATION

<400> 120

Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala Lys Leu Ala Lys Ala Leu  
1 5 10 15

<210> 121

<211> 16

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 121

Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala Lys Leu Ala Lys Ala Leu  
1 5 10 15

<210> 122

<211> 9

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (9)

<223> AMIDATION

<400> 122

Lys Trp Lys Lys Leu Ala Lys Lys Trp  
1 5

TO550" C5002560



<222> (11)  
<223> AMIDATION

<400> 126  
Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu  
1 5 10

<210> 127  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (11)  
<223> AMIDATION

<400> 127  
Phe Ala Leu Ala Lys Ala Leu Lys Lys Ala Leu  
1 5 10

<210> 128  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 128  
Phe Ala Leu Ala Leu Lys Leu Ala Lys Lys Ala Leu  
1 5 10

<210> 129  
<211> 6  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (6)  
<223> AMIDATION

FOUO "E5002660"

[illegible]

```
<400> 132
Phe Ala Leu Leu Lys Ala Leu Lys Lys Ala Leu
  1             5             10
```

106250" E5002860

<210> 133  
<211> 4  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (4)  
<223> AMIDATION

<400> 133  
Lys Trp Lys Lys  
1

<210> 134  
<211> 5  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (5)  
<223> AMIDATION

<400> 134  
Lys Trp Lys Lys Leu  
1 5

<210> 135  
<211> 9  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (9)  
<223> AMIDATION

<400> 135  
Lys Phe Lys Lys Leu Ala Lys Lys Phe  
1 5

<210> 136



	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	---

<220>  
<223> SYNTHETIC SEQUENCE



Variable	Mean	SD	Min	Max
Age (years)	45.2	12.5	25	65
Gender (male/female)	45/55			
Education (years)	12.8	2.1	8	16
Income (€1000/month)	2.5	1.2	1	4
Marital status (married/divorced/separated)	60/30/10			
Health status (good/fair/poor)	70/20/10			
Smoking status (smoker/non-smoker)	30/70			
Alcohol consumption (g/day)	15	20	0	60
Physical activity (hours/week)	2.5	1.5	0	6
Stress level (low/moderate/high)	40/30/30			
Sleep quality (good/fair/poor)	60/30/10			
Dietary intake (kcal/day)	2500	500	2000	3000
Work status (employed/unemployed)	70/30			
Family size (1/2/3+)	2.2	1.1	1	4
Health insurance (public/private)	80/20			
Comorbidities (hypertension/diabetes/cholesterol)	30/20/40			
Medication use (yes/no)	40/60			
Life satisfaction (1-5)	3.5	0.8	1	5
Depression score (0-10)	2.5	1.5	0	10
Loneliness score (0-10)	3.0	1.5	0	10
Life expectancy (years)	78	3	70	85
Quality of life (0-100)	75	15	50	100

```
<400> 142
Phe Ala Leu Ala Leu Lys Leu Lys Lys Leu
  1             5             10
```

```
<210> 143
<211> 10
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>  
<221> MOD_RES  
<222> (10)  
<223> AMIDATION
```

```
<400> 143
Phe Ala Leu Ala Leu Lys Ala Lys Lys Leu
  1             5             10
```

```
<210> 144
<211> 4
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>
<221> MOD_RES
<222> (4)
<223> AMIDATION
```

<400> 144  
Phe Ala Leu Ala  
1

```
<210> 145
<211> 5
<212> PRT
<213> ARTIFICIAL SEQUENCE
```

<220>  
<223> SYNTHETIC SEQUENCE

```
<220>
<221> MOD_RES
```

<222> (5)  
<223> AMIDATION

<400> 145  
Trp Ala Leu Ala Leu  
1 5

<210> 146  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 146  
Gly Ile Gly Lys Phe Leu His Ala Ala Lys Lys Phe Ala Lys Ala Phe  
1 5 10 15  
Val Ala Glu Ile Met Asn Ser  
20

<210> 147  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 147  
Phe Ala Lys Lys Phe Ala Lys Lys Phe Lys Lys Phe Ala Lys Lys Phe  
1 5 10 15  
Ala Lys Phe Ala Phe Ala Phe  
20

<210> 148  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 148  
Lys Lys Val Val Phe Lys Val Lys Phe Lys  
1 5 10

<210> 149  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 149  
Phe Lys Val Lys Phe Lys Val Lys Val Lys  
1 5 10

<210> 150  
<211> 38  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (38)  
<223> AMIDATION

<400> 150  
Leu Pro Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Val Gly Arg Asn  
1 5 10 15

Ile Arg Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly  
20 25 30

Glu Ala Lys Ala Leu Gly  
35

<210> 151  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

106650" E5002860

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 151  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Leu Ala Lys Lys Leu  
20

<210> 152  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 152  
Val Ala Lys Ala Leu Lys Ala Leu Leu Lys Ala Leu Lys Ala Leu  
1 5 10 15

<210> 153  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 153  
Val Ala Lys Phe Leu Ala Lys Phe Leu Lys Lys Ala Leu  
1 5 10

<210> 154  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

106250" 0502901

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 154  
Val Ala Lys Lys Phe Ala Lys Lys Phe Lys Lys Phe Ala Lys Lys Phe  
1 5 10 15

Ala Lys Phe Ala Phe Ala Phe  
20

<210> 155  
<211> 19  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (19)  
<223> AMIDATION

<400> 155  
Val Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu Ala Leu

<210> 156  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 156  
Val Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Leu Ala Leu  
1 5 10 15

<210> 157

<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 157  
Val Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Leu Leu  
1 5 10

<210> 158  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 158  
Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 159  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 159  
Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 160  
<211> 23  
<212> PRT



